

Application Serial No.: 10/042,843
Filing Date: 7/11/2002

Reply to Office action of: 1/28/2005
Attorney Docket No.: DAR-54-98

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in this application:

1 - 22. (Canceled)

23. (New) A dispense mechanism for dispensing a payload, comprising:
an expulsion charge assembly located toward a forward end, and
including:
 a container that contains an ignitable expulsion charge; and
 a fuze that ignites the expulsion charge;
a payload section that contains the payload;
a pusher plate disposed in proximity to the expulsion charge assembly;
a tail assembly that is secured in a detachable manner to a rearward
base section of the payload section by means of an attachment mechanism;
wherein after ignition of the expulsion charge by means of the fuze,
resulting expulsion gas forces are generated and cause the pusher plate to
act as a piston for transmitting the expulsion gas forces through the payload
section, to the tail assembly; and
wherein the expulsion gas forces continue to increase until the expulsion
gas forces acting against the pusher plate and transmitted through the
payload section, to the tail assembly, shear the attachment mechanism of the
rearward base section of the payload section to the tail assembly, causing the
payload to be dispensed.

24. (New) The dispense mechanism according to claim 23, wherein the

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payload section comprises a projectile with low-spin characteristics.

25. (New) The dispense mechanism according to claim 23, wherein the payload section comprises a projectile with non-spin characteristics.

26. (New) The dispense mechanism according to claim 23, wherein the expulsion charge comprises a propellant charge.

27. (New) The dispense mechanism according to claim 23, wherein the fuze comprises a primary projectile that ignites the expulsion charge at a predetermined distance from a target.

28. (New) The dispense mechanism according to claim 23, wherein the expulsion gas forces cause the pusher plate to translate within the payload section.

29. (New) The dispense mechanism according to claim 28, wherein the payload section comprises a payload canister that contains the payload; and wherein the payload canister is forced to slide, within the payload section, toward the rearward base section of the payload section, under the action of the expulsion gas forces that are transmitted by the pusher plate.

30. (New) The dispense mechanism according to claim 23, wherein the payload comprises a plurality of grenades.

31. (New) The dispense mechanism according to claim 30, wherein the payload section comprises a grenade adapter and a spacer.

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32. (New) The dispense mechanism according to claim 23, wherein the attachment mechanism comprises a threaded section that gets sheared under the action of the expulsion gas forces, to cause the payload section to be detached from the tail assembly.

33. (New) The dispense mechanism according to claim 29, wherein the payload section includes a rifled inner surface for providing a rifled movement to the payload canister, as the payload canister travels axially along the payload section; and

wherein the payload section releases the payload with rotational and tangential velocity components.

34. (New) The dispense mechanism according to claim 29, wherein the payload canister includes an outer surface that is notched to mate with a pre-engraved band.

35. (New) The dispense mechanism according to claim 34, wherein the band is made, at least in part, of copper.

36. (New) The dispense mechanism according to claim 29, wherein the payload canister includes an outer surface that mates with an obturator.

37. (New) The dispense mechanism according to claim 36, wherein the obturator is made, at least in part, of an elastomeric material.

38. (New) The dispense mechanism according to claim 36, wherein the

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obturator s made, at least in part, of a nylon material.

39. (New) The dispense mechanism according to claim 36, wherein the obturator s made, at least in part, of a polyvinyl material.

40. (New) The dispense mechanism according to claim 23, wherein the tail assembly comprises a fin assembly.

41. (New) The dispense mechanism according to claim 29, wherein the canister is a generally cylindrically shaped.

42. (New) The dispense mechanism according to claim 29, wherein the canister is made, at least in part, of steel.